	Application No.	**Applicant(s)**
Notice of Allowability	09/966,650	JONES ET AL.
	Examiner	**Art Unit**	
	Ajay M. Bhatia	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *12/2/05*.

2. ☒ The allowed claim(s) is/are *1-4,6,8,10,11,13-15,20,22-29,31-35,41-48 and 53-55*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
    Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *7/19/06*

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

JASON CARDONE
SUPERVISORY PATENT EXAMINER

EXAMINER'S AMENDMENT

Claims 1-4,6,8,10,11,13-15,20,22-29,31-35,41-48 and 53-55 allowed.

An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Kevin M. Jones on July 14, 17 and 18.

The application has been amended as follows:

Please cancel claims 7, 19, 21, 30, 36, and 38.

Please amend claims 1, 8, 20, 31, 41, 53 as follows

Claim 1:

1. A method of flashing an image to a plurality of electrically erasable programmable

read only memories (EEPROMs) across a communications bus, the method comprising:

compressing the image to create a compressed image;

broadcasting the compressed image to the plurality of EEPROMs across the

communication bus[[; and]],wherein the method of broadcasting the compressed image

comprises:

a.   broadcasting the compressed image to a plurality of receivers across the

communications means in a plurality of broadcast packets, without waiting for

<u>confirmation or response from the receivers, wherein the communications bus is of low</u>

<u>bandwidth;</u>

  <u>b. querying at least one of the plurality of receivers for a list of missing</u>

<u>packets from the compressed image; and</u>

  <u>c. re-broadcasting the missing packets;</u>

  <u>d. repeating steps b and c above until all receivers report no missing</u>

<u>packets;</u> and flashing the image on to each of the plurality of EEPROMS.

Claim 8:

8. A system comprising:

  a communication bus;

  a first computer system coupled to the communication bus;

  a plurality of the computer systems coupled to the first computer system across

the communication bus, each of the plurality of computer systems having a electrically

erasable programmable read only memory (EEPROM) device having an image thereon;

and

  wherein the first computer system is adapted to <u>compress and</u>~~simultaneously~~

broadcast a new EEPROM image to each of the plurality of computer systems across

the communication bus the new EEPROM image to be <u>de-compressed and</u> place in the

EEPROM device of each of the plurality of computer systems,[[.]]

<u>wherein broadcasting comprises:</u>

     a.   broadcasting the compressed image to a plurality of receivers across the communications means in a plurality of broadcast packets, without waiting for confirmation or response from the receivers, wherein the communications bus is of low bandwidth;

     b.   querying at least one of the plurality of receivers for a list of missing packets from the compressed image; and

     c.   re-broadcasting the missing packets;

     d.   repeating steps b and c above until all receivers report no missing packets.

Claim 20:

20. A method of flashing a single image of a plurality of electrically erasable programmable read only memories (EEPROMs) across a communication bus, the method comprising:

     broadcasting ~~sending~~ the single image across the communication bust to each of the plurality of EEPROMs; and

     flashing the image onto each of the plurality of EEPROMS, sequentially such that an image is verified to work on one system before other systems attempt to flash the image and wherein broadcasting comprises:

     a.   broadcasting the compressed image to a plurality of receivers across the communications means in a plurality of broadcast packets, without waiting for

confirmation or response from the receivers, wherein the communications bus is of low

bandwidth;

       b.   querying at least one of the plurality of receivers for a list of missing

packets from the compressed image; and

       c.   re-broadcasting the missing packets;

       d.   repeating steps b and c above until all receivers report no missing

packets.

Claim 31.

31. A rack mounted computer system comprising:

       a first chassis having a plurality of servers mounted therein;

       a second chassis having a plurality of servers mounted therein;

       a central power supply system coupled to the first and second chassis and

supplying power thereto;

       a first chassis communication module coupled to each server in the first chassis

by way of a first communication bus;

       a second chassis communication module coupled to each server in the second

chassis by way of a second communication bus;

       a third communication bus coupling the first and second chassis communication

module;

       wherein the first chassis communication module comprises:

a microcontroller coupled to the first communication bus and the third

communication bus;

and an electrically erasable programmable read only memory (EEPROM)

coupled to the microcontroller and adapted to store software images executed by the

microcontroller;

wherein the second chassis communication module comprises:

a microcontroller coupled to the second communication bus and the third

communication bus; and

an EEPROM coupled to the microcontroller adapted to store software images

executed by the microcontroller;

wherein a server of the plurality of servers in one of the first and second chassis

is adapted broadcast simultaneously a new software image to be flashed to each

EEPROM in each of the first and second chassis communication module, wherein the

method of broadcasting the image comprises:

a.   broadcasting the compressed image to a plurality of receivers across the

communications means in a plurality of broadcast packets, without waiting for

confirmation or response from the receivers, wherein the first and second

communications bus is of low bandwidth;

b.   querying at least one of the plurality of receivers for a list of missing

packets from the compressed image; and

c.   re-broadcasting the missing packets;

d.   repeating steps b and c above until all receivers report no missing

packets.

Claim 41:

41. A system comprising:

        a first computer means for sending a new software image;

        a plurality of computer means for receiving the new software image, each of the

plurality of computer means having an electrically erasable programmable read only

memory (ROM) device requiring a software image;

        a communication bus means coupling the first computer means and the plurality

of computer means, the communication bus means for allowing the first computer

means to send the new software images to the plurality of computer means;

        and wherein the first computer means is adapted to simultaneously broadcast the

new software image to each of the plurality of computer means across the

communication means, the new software image to be placed in the EEPROM device of

each of the plurality of computer means, wherein the method of broadcasting the image

comprises:

        a.   broadcasting the compressed image to a plurality of receivers across the

communications means in a plurality of broadcast packets, without waiting for

confirmation or response from the receivers, wherein the communications bus is of low

bandwidth;

        b.   querying at least one of the plurality of receivers for a list of missing

packets from the compressed image; and

c.   re-broadcasting the missing packets;

d.   repeating steps b and c above until all receivers report no missing

packets.

Claim 53:

53. A method of flashing an image to a plurality of electrically erasable programmable

read only memories (EEPROMs) across a communication bus, the method of

comprising:

compressing the image to create a compressed image; wherein compressing the

image comprises:

compressing data using Huffman encoding where a frequency table is computed

from data similar to that being transferred, which is available to both the sender and

receiver of the transmission; whereby compression is less than ideal, but a reduced

amount of data is required to be transferred; and

broadcasting the compressed image to the plurality of EEPROMs across the

communication bus; and

flashing the image onto each of the plurality of EEPROMs, wherein the method of

broadcasting the image comprises:

a.   broadcasting the compressed image to a plurality of receivers across the

communications means in a plurality of broadcast packets, without waiting for

confirmation or response from the receivers, wherein the communications bus is of low

bandwidth;

b.   querying at least one of the plurality of receivers for a list of missing

packets from the compressed image; and

c.   re-broadcasting the missing packets;

d.   repeating steps b and c above until all receivers report no missing

packets.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: The present

invention as claimed is allowable over the prior art. Examiner contacted applicant on

July 14 and multi conversation discussing the present claims were discussed between

July 14-19 about clarification to the claims and features that were disclosed in some

claims and not all. Applicant agreed to make all independent claims disclose the steps

a, b, c and d in addition applicant also clarified the communication bus is low bandwidth.

Examiner will discuss the amendment to claims in view of the prior art of record.

Patents 6,457,175 and 7,069,431 both disclose system that communicate across

a network to program a EEPROM, but the present invention differs in that it requires

step a-d in which it defines the communication as broadcasting, querying for missing

packet and re-broadcast the missing packet which occurs of the communication bus.

Additionally applicants present invention over come Patent Application Publication

2002/0131085 in that the prior art disclose a CPU bus over which is communicated via

to communication control device then communicates with the EEPROM to reprogram it.

This differs from the present invention in that applicant has defined in the specification

in paragraph 10 low bandwidth communication bus is an I^2C which differentiate over all the cited prior art. In addition to communication over the I^2C communication bus applicant also discloses in the claims the broadcast is transmitted to a plurality of EEPROM, which the prior art discussed above only, disclosed a single EEPROM. Additionally during the discussion since applicant has amended the claims to disclose the same subject matter the restriction is withdrawn. Therefore the combination of the above discussed reason in addition to feature which were not discussed the presently claimed invention overcomes the prior art of record and therefore is allowable.

Please use drawing submitted 3/11/03.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ajay M. Bhatia whose telephone number is (571)-272-3906. The examiner can normally be reached on M-F 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571)272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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